



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
MISSOURI OIL AND GAS COUNCIL

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK MO Oil & Gas Council

RECEIVED  
FORM OGC-3

DEC 15 2003

☒ APPLICATION TO DRILL ☐ DEEPEN ☐ PLUG BACK ☐ FOR AN OIL WELL ☒ OR GAS WELL

NAME OF COMPANY OR OPERATOR <b>Osborn Energy, L.L.C.</b>		DATE 4 December 2003	
ADDRESS <b>24850 Farley</b>	CITY <b>Bucyrus</b>	STATE <b>Kansas</b>	ZIP CODE <b>66013</b>

DESCRIPTION OF WELL AND LEASE

NAME OF LEASE <b>Yahnig</b>	WELL NUMBER <b>2-9-43-31</b>	ELEVATION (GROUND) <b>853</b>
(GIVE FOOTAGE FROM SECTION LINE)		
WELL LOCATION <b>330</b> FT. FROM (N) SECTION LINE <b>2310</b> FEET FROM (E) (W) SECTION LINE		
WELL LOCATION <b>NW-NW-NE</b>	SECTION <b>9</b>	TOWNSHIP <b>43N</b>
	RANGE <b>31W</b>	COUNTY <b>Cass</b>

NEAREST DISTANCE FROM PROPOSED LOCATION TO PROPERTY OR LEASE LINE **660** FEET  
DISTANCE FROM PROPOSED LOCATION TO NEAREST DRILLING, COMPLETED OR APPLIED — FOR WELL ON THE SAME LEASE **None** FEET

PROPOSED DEPTH <b>600'</b>	DRILLING CONTRACTOR, NAME AND ADDRESS <b>Susie Glaze dba Glaze Drilling, Co. 22139 S. Victory Rd. Spg. Hill, KS 66083</b>	ROTARY OR CABLE TOOLS <b>Rotary</b>	APPROX. DATE WORK WILL START <b>11 December 2003</b>
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NUMBER OF ACRES IN LEASE  
**Part of a 3400 Ac lease**

NUMBER OF WELLS ON LEASE, INCLUDING THIS WELL, COMPLETED IN OR DRILLING TO THIS RESERVOIR **1**

NUMBER OF ABANDONED WELLS ON LEASE **None**

IF LEASE PURCHASED WITH ONE OR MORE WELLS DRILLED, FROM WHOM PURCHASED?  
NAME **New lease from land owner**  
ADDRESS \_\_\_\_\_

NO. OF WELLS: PRODUCING **0**  
INJECTION **0**  
INACTIVE **0**  
ABANDONED **0**

STATUS OF BOND ☐ SINGLE WELL AMOUNT \$ \_\_\_\_\_ ☒ BLANKET BOND AMOUNT \$ **30,000** ☒ ON FILE ☐ ATTACHED

REMARKS: (IF THIS IS AN APPLICATION TO DEEPEN OR PLUG BACK, BRIEFLY DESCRIBE WORK TO BE DONE, GIVING PRESENT PRODUCING ZONE AND EXPECTED NEW PRODUCING ZONE; USE BACK OF FORM IF NEEDED.)

PROPOSED CASING PROGRAM				APPROVED CASING — TO BE FILLED IN BY STATE GEOLOGIST			
AMOUNT	SIZE	WT/FT	CEM.	AMOUNT	SIZE	WT/FT	CEM.
20'	8 5/8"	28.00	20' to surface				to surf
600'	5 1/2"	15.50	600' to surface				

I, the undersigned, state that I am the **Mgn. of Drilling Operations/Geologist** of the **Osborn Energy, L.L.C.** (company), and that I am authorized by said company to make this report, and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct, and complete to the best of my knowledge.

SIGNATURE *R. R. Ashlock* DATE **12/8/03**

PERMIT NUMBER <b>20741</b>	<input checked="" type="checkbox"/> DRILLER'S LOG REQUIRED	<input checked="" type="checkbox"/> E-LOGS REQUIRED IF RUN
APPROVAL DATE <b>12-7-03</b>	<input checked="" type="checkbox"/> CORE ANALYSIS REQUIRED IF RUN	<input checked="" type="checkbox"/> DRILL STEM TEST INFO. REQUIRED IF RUN
APPROVED BY <i>James R. Gustafson</i>	<input type="checkbox"/> SAMPLES REQUIRED	
	<input type="checkbox"/> SAMPLES NOT REQUIRED	
	<input type="checkbox"/> WATER SAMPLES REQUIRED AT _____	

NOTE ► THIS PERMIT NOT TRANSFERABLE TO ANY OTHER PERSON OR TO ANY OTHER LOCATION

APPROVAL OF THIS PERMIT BY THE OIL AND GAS COUNCIL DOES NOT CONSTITUTE ENDORSEMENT OF THE GEOLOGIC MERITS OF THE PROPOSED WELL NOR ENDORSEMENT OF THE QUALIFICATIONS OF THE PERMITTEE.

I \_\_\_\_\_ of the \_\_\_\_\_ Company confirm that an approved drilling permit has been obtained by the owner of this well. Council approval of this permit will be shown on this form by presence of a permit number and signature of authorized council representative.

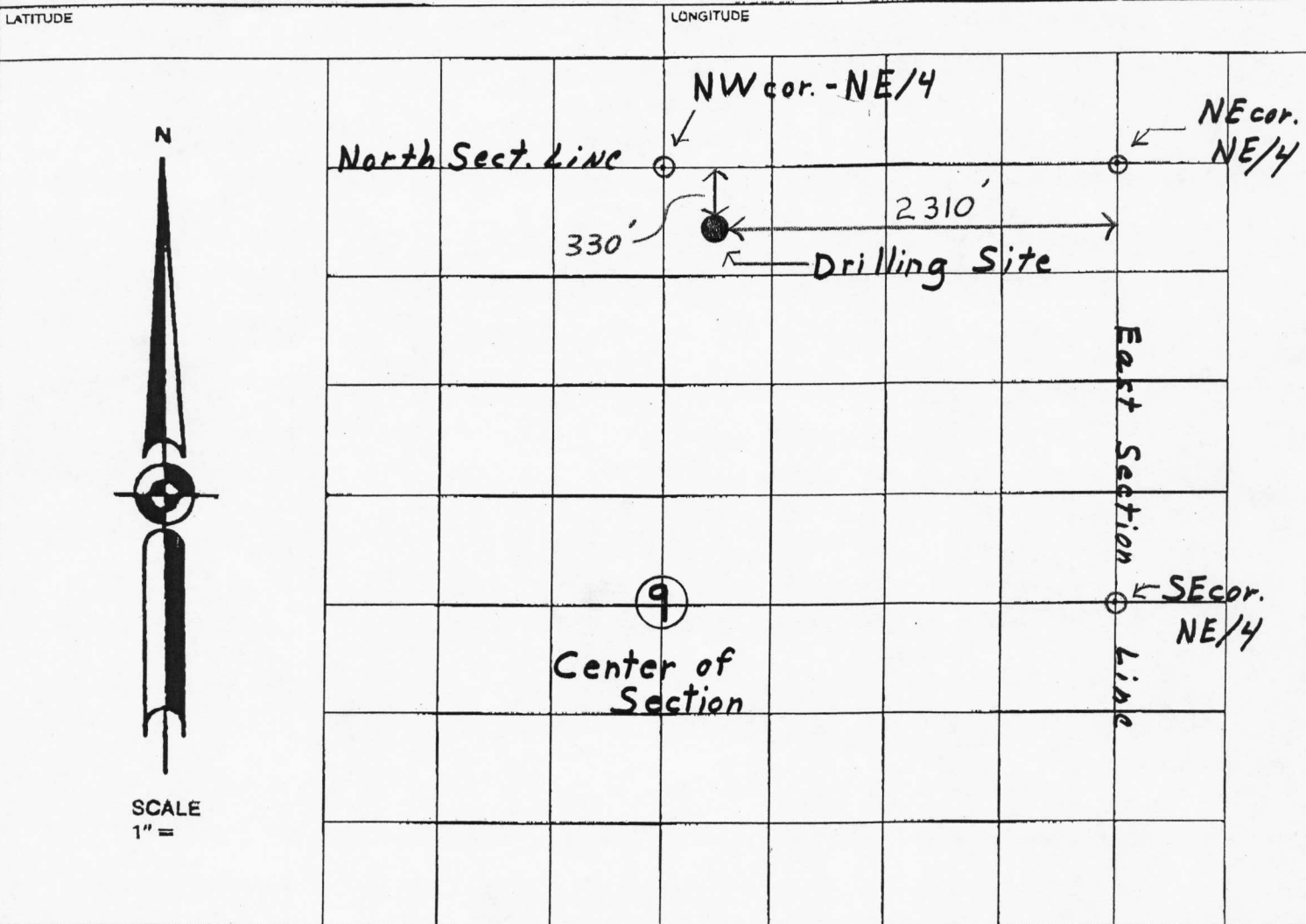
DRILLER'S SIGNATURE	DATE
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MISSOURI DEPARTMENT OF NATURAL RESOURCES  
MISSOURI OIL AND GAS COUNCIL  
WELL LOCATION PLAT

FORM OGC-4

OWNER Osborn Energy, LLC  
LEASE NAME Yahnig COUNTY Cass  
330 FEET FROM N SECTION LINE AND 2310 FEET FROM E SECTION LINE OF SEC. 9, TWP 43N, RANGE 31W  
(N)-(S) (E)-(W)



REMARKS Location to be "surveyed" in w/ GPS by Mr. Parker  
w/ the MDNR on or about 12-9-03  
Landowner: David & Mary Yahnig, 32418 So. Main City, Drexel, MO 64734

INSTRUCTIONS  
On the above plat, show distance of the proposed well from the two nearest section lines, the nearest lease line, and from the nearest well on the same lease completed in or drilling to the same reservoir. Do not confuse survey lines with lease lines. See rule 10 CSR 50-2.030 for survey requirements. Lease lines must be marked.

This is to Certify that I have executed a survey to accurately locate oil and gas wells in accordance with 10 CSR 50-2.030 and that the results are correctly shown on the above plat.

REMIT TWO (2) COPIES TO:  
MISSOURI OIL AND GAS COUNCIL  
P.O. BOX 250, ROLLA, MO 65402

REGISTERED LAND SURVEYOR

NUMBER

(SEAL)

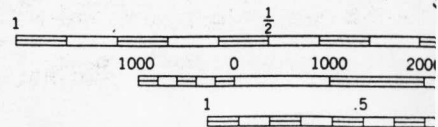
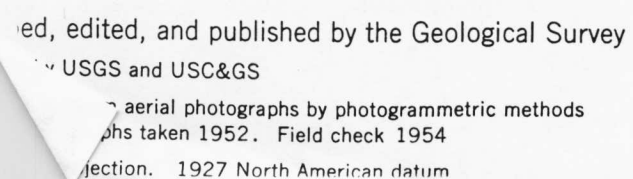


MISSOURI DEPARTMENT OF NATURAL RESOURCES  
MISSOURI OIL AND GAS COUNCIL  
**WELL LOCATION PLAT**

RECEIVED FORM OGC-4

DEC 15 2003

OWNER <b>Osborn Energy, LLC</b>		MO Oil & Gas Council (OGC #20741)	
LEASE NAME <b>Yahnig (Well #2-9-43-31)</b>		COUNTY <b>Cass</b>	
330 FEET FROM <u>N</u> SECTION LINE AND 2310 FEET FROM <u>E</u> SECTION LINE OF SEC. <u>9</u> , TWP <u>43</u> N, RANGE <u>31</u> W (N) - (S) (E) - (W)			
<p>SCALE 1" = 990'</p>			
REMARKS (12-9-2003)			
Location "surveyed" in with GPS by Mr. Matthew Parker with the Missouri Dept. of Natural Resources			
Landowner: David and Mary Yahnig, 32418 So. Main City, Drexel, MO 64734			
<b>INSTRUCTIONS</b> On the above plat, show distance of the proposed well from the two nearest section lines, the nearest lease line, and from the nearest well on the same lease completed in or drilling to the same reservoir. Do not confuse survey lines with lease lines. See rule 10 CSR 50-2.030 for survey requirements. Lease lines must be marked.		This is to Certify that I have executed a survey to accurately locate oil and gas wells in accordance with 10 CSR 50-2.030 and that the results are correctly shown on the above plat.  (SEAL)	
REMIT TWO (2) COPIES TO: MISSOURI OIL AND GAS COUNCIL P.O. BOX 250, ROLLA, MO 65401		REGISTERED LAND SURVEYOR	NUMBER





MISSOURI DEPARTMENT OF NATURAL RESOURCES  
MISSOURI OIL AND GAS COUNCIL

## APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

<input checked="" type="checkbox"/> APPLICATION TO DRILL		<input type="checkbox"/> DEEPEN	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> FOR AN OIL WELL	<input checked="" type="checkbox"/> OR GAS WELL		
NAME OF COMPANY OR OPERATOR <b>Osborn Energy, L.L.C.</b>				DATE <b>4 December 2003</b>			
ADDRESS <b>24850 Farley</b>		CITY <b>Bucyrus</b>		STATE <b>Kansas</b>	ZIP CODE <b>66013</b>		
DESCRIPTION OF WELL AND LEASE							
NAME OF LEASE <b>Yahnig</b>		WELL NUMBER <b>2-9-43-31</b>		ELEVATION (GROUND) <b>845</b>			
(GIVE FOOTAGE FROM SECTION LINE)							
WELL LOCATION <b>660</b> FT. FROM (N) (S) SECTION LINE <b>1980</b> FEET FROM (E) (W) SECTION LINE							
WELL LOCATION <b>C-NW-NE</b>		SECTION <b>9</b>	TOWNSHIP <b>43N</b>	RANGE <b>31W</b>	COUNTY <b>Cass</b>		
NEAREST DISTANCE FROM PROPOSED LOCATION TO PROPERTY OR LEASE LINE <b>660</b> FEET							
DISTANCE FROM PROPOSED LOCATION TO NEAREST DRILLING, COMPLETED OR APPLIED -- FOR WELL ON THE SAME LEASE <b>None</b> FEET							
PROPOSED DEPTH <b>600'</b>	DRILLING CONTRACTOR NAME AND ADDRESS <b>Susie Glaze dba Glaze Drilling, Co. 22139 S. Victory Rd. Spg. Hill, KS 66083</b>		ROTARY OR CABLE TOOLS <b>Rotary</b>		APPROX. DATE WORK WILL START <b>11 December 2003</b>		
NUMBER OF ACRES IN LEASE <b>Part of a 3400 Ac lease</b>	NUMBER OF WELLS ON LEASE, INCLUDING THIS WELL, COMPLETED IN OR DRILLING TO THIS RESERVOIR <b>1</b>						
IF LEASE PURCHASED WITH ONE OR MORE WELLS DRILLED, FROM WHOM PURCHASED? NAME <b>New lease from land owner</b> ADDRESS _____					NO. OF WELLS: PRODUCING <b>0</b> INJECTION <b>0</b> INACTIVE <b>0</b> ABANDONED <b>0</b>		
STATUS OF BOND		<input type="checkbox"/> SINGLE WELL AMOUNT \$ _____		<input checked="" type="checkbox"/> BLANKET BOND AMOUNT \$ <b>30,000</b>			
		<input checked="" type="checkbox"/> ON FILE <input type="checkbox"/> ATTACHED					
REMARKS: (IF THIS IS AN APPLICATION TO DEEPEN OR PLUG BACK, BRIEFLY DESCRIBE WORK TO BE DONE, GIVING PRESENT PRODUCING ZONE AND EXPECTED NEW PRODUCING ZONE; USE BACK OF FORM IF NEEDED.) <div style="text-align: center; font-size: 2em; font-family: cursive;">Change Log see new AP</div>							
PROPOSED CASING PROGRAM				APPROVED CASING -- TO BE FILLED IN BY STATE GEOLOGIST			
AMOUNT	SIZE	WT/FT	CEM.	AMOUNT	SIZE	WT/FT	CEM.
<b>20'</b>	<b>8 5/8"</b>	<b>28.00</b>	<b>20' to surface</b>				
<b>600'</b>	<b>5 1/2"</b>	<b>15.50</b>	<b>600' to surface</b>				
I, the undersigned, state that I am the <u>Mgn. of Drilling Operations/Geologist</u> of the <u>Osborn Energy, L.L.C.</u> (company), and that I am authorized by said company to make this report, and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct, and complete to the best of my knowledge.							
SIGNATURE <i>R. R. Ashford</i>				DATE <b>12/4/03</b>			
PERMIT NUMBER <b>20741</b>				<input checked="" type="checkbox"/> DRILLER'S LOG REQUIRED <input checked="" type="checkbox"/> E-LOGS REQUIRED IF RUN			
APPROVAL DATE <b>12-5-03</b>				<input checked="" type="checkbox"/> CORE ANALYSIS REQUIRED IF RUN <input checked="" type="checkbox"/> DRILL STEM TEST INFO. REQUIRED IF RUN			
APPROVED BY <i>M. R. [Signature]</i>				<input type="checkbox"/> SAMPLES REQUIRED			
				<input type="checkbox"/> SAMPLES NOT REQUIRED			
				<input type="checkbox"/> WATER SAMPLES REQUIRED AT _____			
NOTE ► THIS PERMIT NOT TRANSFERABLE TO ANY OTHER PERSON OR TO ANY OTHER LOCATION							
APPROVAL OF THIS PERMIT BY THE OIL AND GAS COUNCIL DOES NOT CONSTITUTE ENDORSEMENT OF THE GEOLOGIC MERITS OF THE PROPOSED WELL NOR ENDORSEMENT OF THE QUALIFICATIONS OF THE PERMITTEE.							
I _____ of the _____ Company confirm that an approved drilling permit has been obtained by the owner of this well. Council approval of this permit will be shown on this form by presence of a permit number and signature of authorized council representative.							
DRILLER'S SIGNATURE				DATE			

Cass  
Asksu

037-20741

SE SE NW NW NW NE

Dratt

43 31  
9

## Geological Report

43 31 09 002

### **Yahnig #2-9-43-31**

2310' FEL, 300' FNL (N38° 36.634', W94° 20.999') → from our GPS unit

Section 9-T43N-R31W

Cass Co., Missouri

OGS #20741

Elevation: 853 GL (est. form Topo. Map)

Drilling Contractor: Susie Glaze, dba Glaze Drilling Co.

Spud: 12/9/2003

Surface: 11 1/4" bore hole, set 20' of 8 5/8" csg. cmt'd with 6 sx

Production bore hole: 7 7/8"

Rotary Total Depth: 486' on 12/18/03 (Waited on weather to finish well)

Drilling fluid: Air & Mist

E-Log Total Depth: None run

Production Csg.: None, D&A

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<u>Formation</u>	<u>Driller Log Tops</u>	<u>Datum</u>
Stark Shale	Eroded away	----
Hushpuckney Shale	Eroded away	----
Base Kansas City	Eroded away	----
"Upper" Knobtown Sand	Eroded away	----
"Middle" Knobtown Sand	Eroded away	----
"Lower" Knobtown Sand	Eroded away	----
Carbonaceous Zone in Tacket Fm.	Eroded away	----
"Big Lake" Sand	Eroded away	----
South Mound Zone	Eroded away	----
Hepler (Wayside) Sand	Absent	----
"Upper" Mulberry Zone	Absent	----
Mulberry Zone	60	793
Weiser Sand	No Call	----
Myrick Station	90	763
Anna Shale (Lexington Coal Zone)	95	758
Peru Sand	No Call	----
Summit Shale Zone	132	721
Mulky Coal/Shale Zone	150	703
"Upper" Squirrel Sand	Absent	----
"Middle" Squirrel Sand	187	666
"Lower" Squirrel Sand Zone	Absent	----
Bevier Zone	No Call	----
Verdigris (Ardmore)	No Call	----
Croweburg Zone	No Call	----
Mineral Coal Zone	264	589
Scammon Coal Zone	305	548
Tebo Coal Zone	Absent	----

<u>Formation</u>	<u>Driller Log Tops</u>	<u>Datum</u>
Bartlesville "A" Sand Zone	330	523
Bartlesville "B" Sand	Poorly Dev	----
Dry Wood Coal	Absent	----
Rowe Coal	Absent	----
Neutral Coal(s)	Absent	----
"E" (?) Sand	391	462
"F" (?G) Sand	410	443
Riverton Coal	No Call	----
Mississippian	474	379
Rotary Total Depth	486	367
E-Log Total Depth	None Run	----

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**Major Zones of Interest** (Depths based Driller's Log measurements.)Note: Some basic abbreviations used in the following report.

- T = Total gas readings in units
- BG = Background gas in units
- CH = Chromatograph readings in units
- CG = Connection gas in units
- GT = Open flow gas test
- TGA = Total Gas Analyzer

\*\* Set up gas detector and equipment. "Zeroed" TGA & CH, attenuators set on x4. T = 55.2 & CH = 59.6

40' BG, T = 52 & CH = 51.2 (units still settling down from "re-zeroing")

50' BG, T = 50.4 & CH = 44.0

60' BG, T = 50.0 & CH = 40.1

Mulberry Coal Zone, 60-61. Shale, black, gritty textured in most, very carbonaceous in part, trace "coaly shale", both pyritic in part, neither contained shows of free gas. No increase in gas units.

\*\* 60' GT, no open flow, driller reported "some water", "just damp"

67' BG, T = 48.8 & CH = 32.8

70' BG, T = 48.4 & CH = 32.4

75' BG, T = 48.4 & CH = 31.2

80' BG, T = 48.0 & CH = 30.9

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84' BG, T = 47.6 &amp; CH = 28.4

89' BG, T = 48.0 &amp; CH = 28.4

92' BG, T = 47.6 &amp; CH = 26.8

Myrick Station Limestone. 90-95. Limestone, dark tans to dark browns, very fine to coarse crystalline, trace dolomitic, very poor intercrystalline porosity, poor crystalline porosity where dolomitic, argillaceous and fossiliferous, no odor, no fluorescence, questionable stain, no other shows, and no increase in gas units.

Anna Shale (Lexington Coal Zone), 95-96. Shale, black, blocky to angular cuttings, trace pyritic, and contained no shows of free gas. Shale, gray, gritty textured, abundant carbonaceous fragments, no shows of free gas were found. Driller recorded only one foot, believe closer to 2.5 +/- feet, but rather poorly developed. No increase in gas units. Cannot recommend further testing.

100' BG, T = 47.6 &amp; CH = 25.2

\*\* 100' GT, no open flow and "slight" increase in water.

"Peru" Sand. No call regarding top or thickness. Sample bag 100-110 contained: Sandstone, light grayish green, very fine to fine grain, angular, poorly sorted, well to very well consolidated, firm, poor to very poor intergranular porosity, few sand clusters very thinly laminated with carbonaceous material, no hydrocarbon shows were found and no increase in gas units. Estimated sand thickness to be no more than 4 +/- feet.

106' BG, T = 48.0 &amp; CH = 20.0

111' BG, T = 47.2 &amp; CH = 19.6

120' BG, T = 47.2 &amp; CH = 18.8

123' BG, T = 46.8 &amp; CH = 18.0

130' BG, T = 46.4 &amp; CH = 17.2

Summit Shale Zone. 132-133. Shale, black, platy to blocky with trace angular cuttings, pyritic, no apparent shows of free gas, and only a 1.6 gas unit increase over background. Driller noted only one foot, but believe zone to be closer to 3 +/- feet thick. Zone does not merit further testing.

135' BG, T = 48.0 &amp; CH = 17.6

140' BG, T = 47.2 &amp; CH = 17.2



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\*\* 140' GT, no open flow, "had another increase in water".

145' BG, T = 47.6 & CH = 16.4

150' BG, T = 47.2 & CH = 16.0

Mulky Shale/ Coal Zone. 150-152. Shale, black, mostly angular cuttings, trace platy, no shows of free gas. Coal and "coaly shale", pyritic in part, a good percentage of the coal were "floaters", no shows of free gas were observed, had an increase of 2.40 units over background. Including the coal and coaly shale, believe the Mulky to be closer to 4 +/- feet thick. Based on the lack of gas shows from the cuttings, no significant increase in gas units, no open flow, and no increase in water, this zone does not merit further testing.

156' BG, T = 49.2 & CH = 16.0

157' BG, T = 49.6 & CH = 16.0

158', CH auto cycled and read 22.4 units of methane gas only.

159' BG, T = 47.6 & CH = 16.0

\*\* 160' GT, no open flow and no increase in water.

"Upper" Squirrel Sand Zone. Not developed, only a very-very light / pale green siltstone is present, micaceous and pyritic in part.

169' BG, T = 48.8 & CH = 14.0

176' BG, T = 47.6 & CH = 14.0

180' BG, T = 47.6 & CH = 13.6

"Middle" Squirrel Sand. 187-195. Sandstone, very-very light gray, very fine to fine grain, poorly sorted, well consolidated, firm trace semi-firm, poor intergranular porosity, trace carbonaceous fragments in some sand clusters, trace micaceous, no shows. Sand becomes fine to medium grain and a little "salt and pepper" with depth. No increase in gas units.

189' BG, T = 47.6 & CH = 14.0

192' BG, T = 48.0 & CH = 12.8

200' BG, T = 48.0 & CH = 12.8

\*\* 200' GT, no open flow and no increase in water.

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210' BG, T = 47.2 & CH = 12.8

215' BG, T = 48.0 & CH = 13.2

220' BG, T = 48.0 & CH = 12.8

230' BG, T = 47.2 & CH = 14.0

235' BG, T = 47.6 & CH = 14.8

240' BG, T = 17.6 & CH = 14.4

\*\* 240', shut down for the day, 12/15/03.

12/18/03. Check gas sample line, re-zeroed gas detector, started drilling ahead at 9:58 A.M. BG, T = 42.4 & CH = 40.4

"Lower" Squirrel Sand Zone. Not developed.

Bevier Coal Zone. No Call. Sample bag 240-250 contained traces of coal, "coaly shale", and light gray gritty textured shale with carbonaceous fragments, no shows of gas were observed.

246' BG, T = 42.0 & CH = 38.4

249' BG, T = 43.6 & CH = 36.8

250' BG, T = 43.6 & CH = 35.6

"Upper" Cattleman Sand. 250-256. Sandstone, white with very light green tint, very fine to fine grain, poorly sorted, well consolidated, firm, poor porosity, silty to shaly, rather poorly developed, no show, and no increase in gas units.

260' BG, T = 42.4 & CH = 29.6

\*\* 260' GT, no open flow and no increase in water.

Mineral Coal Zone. 264-273. Shale, very dark gray to black, mostly blocky cuttings, pyritic, trace black with carbonaceous material towards base, no shows of free gas, very slight increase in gas units, 5.2, believe from the carbonaceous area. Does not merit further testing.

266' BG, T = 38.8 & CH = 30.4

267' BG, T = 44.0 & CH = 30.0

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270' BG, T = 40.8 & CH = 29.6

274' BG, T = 41.6 & CH = 27.6

280' BG, T = 40.4 & CH = 24.8

\*\* 280' GT, no open flow and no increase in water.

281' BG, T = 38.4 & CH = 15.2

290' BG, T = 37.6 & CH = 12.0

"Middle" Cattleman Sand. 291-296. Sandstone, white with very light grayish-green tint, has sort of a "salt and pepper" appearance in part, silt size to fine grain, angular, poorly sorted, moderately well to well consolidated, friable to firm, poor intergranular porosity for the most part, silty to shaly in part, no shows, and no increase in gas units.

\*\* 300', CH had slowly decreased to 2.4, so re-set to read 52. T was down to 35.2 so reset it to read 48.0. Both bounced back and forth a few units while stabilizing. The Driller increased the size of the drilling pit and worked on "mist" pump during this time.

303' BG, T = 47.6 & CH = 49.6

Scammon Coal Zone. 305-308. Shale, very dark gray, black, mostly angular cuttings, pyritic in part, contained no show. Coal and "coaly shale", pyritic in part, half-a-dozen or so were "floaters", very-very weak, scattered shows of free gas. Had a slight increase of 6.0 units of gas.

307' BG, T = 48.4 & CH = 48.4

310' BG, T = 49.6 & CH = 48.4

312' BG, T = 52.0 & CH = 48.4

313' CH auto cycled and read 67.2 or an increase of 18.8 units of methane only over BG.

314' BG, T = 55.6

320' BG, T = 52.0 & CH = 48.0

\*\* 320' GT, no open flow and no increase in water.

324' BG, T = 48.4 & CH = 44.8

326' CH auto cycled and read 48.4 units of methane, no increase

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330' BG, T = 48.4 & CH = 44.0

Bartlesville "A" Sand. 330-335. Driller reported sandstone through this interval, but the cuttings from this footage consisted primarily of a pale green siltstone with a trace of a "marly" calcareous shale. No well-developed sandstone was present in the cuttings that were "bagged".

335' BG, T = 48.8 & CH = 42.8

340' BG, T = 48.4 & CH = 44.0

The "Un-named" Zone. No call. Sample bag 340-350 contained traces of coal and coaly shale along with a gray shale with carbonaceous fragments in part. No shows of free gas were found and no increase in gas units. Figure the zone is more or less just a very thin carbonaceous layer within the shale. Noted only for the record.

343' BG, T = 47.6 & CH = 40.8

348' BG, T = 47.6 & CH = 41.2

352' BG, T = 47.6 & CH = 40.4

360' BG, T = 48.4 & CH = 39.6

362' BG, T = 48.4 & CH = 38.0

367' BG, T = 48.0 & CH = 37.2

370' BG, T = 48.4 & CH = 37.2

380' BG, T = 48.4 & CH = 37.6

384' BG, T = 48.8 & CH = 35.2

Dry Wood, Rowe, and Neutral(s) Coal Zones were not present in the subject well.

"E" (?) Sand. 391-394. Sandstone, white, fine grain, sub-angular to angular, poor to moderately sorted, very well consolidated, firm, poor granular porosity, trace silty with carbonaceous fragments, no show and no increase in gas units

393' BG, T = 48.8 & CH = 34.8

399' BG, T = 48.0 & CH = 34.8

\*\* 400' GT, no open flow and no increase in water.



"F" ("G"?). Sand. 410-417. Sandstone, white, somewhat "salt and pepper", fine grain, sub-angular to very angular, poor trace moderately sorted, very well consolidated, poor porosity, micaceous in most, no show, and no increase in gas units. Need to do some further geological work in the area before deciding exactly which "sand" this is. Without the aid of an E-log for correlation, will call it "F" as of report time.

412' BG, T = 47.2 & CH = 30.8

417' BG, T = 47.2 & CH = 31.2

427' BG, T = 46.8 & CH = 27.2

435' BG, T = 47.6 & CH = 27.2

440' BG, T = 47.2 & CH = 26.0

451' BG, T = 46.8 & CH = 21.6

460' BG, T = 47.2 & CH = 20.8

473' BG, T = 47.2 & CH = 16.4

Riverton Coal Zone. No Call. In the 470-480 sample bag, along with Mississippian conglomerate cuttings, there were coal and coaly shale fragments found, neither exhibited shows of free gas. There was only a very-very slight increase in gas units of 2.80 +/- . This coal and coaly shale could also be just scattered plant debris that was deposited along with the conglomeritic material and not truly the Riverton Coal. At any rate it appears to be only a few inches thick best, based on the percentage of cuttings.

479' BG, T = 48.8 & CH = 16.4

Mississippi (an). 474-486 (RTD). Conglomerate composed of the following: Chert, various shades of cream to light tans, off white to white, light grays, and yellow-orange, tripolitic for the most part, trace fractured and sharp, trace semi-translucent. Shale, aqua marine to pale greens - trace sandy in part, trace dark grays and light beige. Trace pyrite fragments. No increase in gas units.

481' BG, T = 50.0 & CH = 10.4

484' BG, T = 45.6 & CH = 9.2

485' BG, T = 45.2 & CH = 8.0

486' BG, T = 44.8 & CH = 7.2

\*\* 486' GT at total depth, no open flow and no increase in water.

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**Brief Summary:**

Mulberry	No open flow, "damp"
Lexington	No open flow, "slight increase in water"
Summit	No open flow, "little more increase in water"
Mulky	No open flow, no apparent increase water
"Middle" Squirrel	No open flow, no increase in water
Mineral	No open flow, no increase in water
Scammon	No open flow, no increase in water
Bartlesville Sand(s)	No open flow, no increase in water
<u>Mississippi</u>	<u>No open flow, no increase in water</u>
Total	"0" MCF

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\*\* Structural comparison of the subject well using the Top of the Lexington Zone:

<u>Yahnig # 2-9-43-31</u>	Flanary #1-24-43-32
758	733

End Report  
19 December 2003  
Rex R. Ashlock  
Osborn Energy, L.L.C.

**OSBORN ENERGY, L.L.C.**  
24850 Farley Street  
Bucyrus, KS 66013  
(913) 533-9900 Office (913) 533-9955 Fax

**R E C E I V E D**  
DEC 15 2003  
MO Oil & Gas Council


10 December 2003

Matthew Parker  
Missouri Department of Natural Resources  
Geological Survey and Resource Assessment  
P.O. Box 250  
Rolla, MO 65402-0250

"Matt",

Wanted to thank you again for coming all the way from Rolla to help me with the drilling location surveys. Hope your trip back was all right and you got to feeling better. I have enclosed the OGC-3 and OGC-4 forms with the corrected information you requested. When we get finished drilling, will send you the rest of the required forms and any E-logs we might run.

Sincerely,

  
Rex R. Ashlock